

American Museum Novitates

PUBLISHED BY THE AMERICAN MUSEUM OF NATURAL HISTORY
CENTRAL PARK WEST AT 79TH STREET, NEW YORK 24, N.Y.

NUMBER 1983

FEBRUARY 8, 1960

Results of the Archbold Expeditions. No. 81 The Crane Flies of the Fourth Archbold Expedition to New Guinea (Diptera, Tipulidae), 1

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In the present paper I am considering part of the Tipulidae that were taken by Geoffrey M. Tate and L. J. Brass while members of the Fourth Archbold Expedition to New Guinea. All materials were taken in northeastern Papua, including Goodenough Island off the eastern coast of Papua, and include a considerable number of new and rare species of these flies. I am particularly indebted to Mr. Tate, mammalogist, and to Mr. Brass, botanist, for the time and attention devoted to the collection and preservation of these fragile flies. The types and representatives of the previously described species are preserved in the collection of the American Museum of Natural History, and duplicates of the available species are in my personal collection of these flies.

DESCRIPTIONS OF COLLECTING AREAS

Because of the interest and importance of the materials, a summary of the camps and collecting stations where the specimens were taken is given:

CAMP 1

Menapi, Cape Vogel Peninsula; sea level. Grass-covered hills up to 150 meters in elevation, with gullies containing rain forest; extensive rain forests

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a short distance back from the coast; a few small sago swamps. March 21 to May 4, 1953. (Tate.)

CAMP 1A

Dabora Caves, about 7 miles east of Menapi; collecting in limestone caves at an altitude of about 50 meters. April 15, 1953. (Tate.)

CAMP 2

Baiawa, Moi Biri Bay (within Collingwood Bay); sea level to about 30 meters; collecting on grasslands near coast and in lowland rain forest inland. May 6-10, September 7-9, 1953. (Tate.)

CAMP 3

Biniguni Camp, Gwariu River, a tributary of the Rakua River; camp about 190 meters above sea level on north bank of the river, which here is a swift rushing stream with open bouldery bed, flowing through rain forest; a steep escarpment of the Maneau Range rises from the south bank of river. July 27 to August 14, 1953. (Tate.)

CAMP 4

Maneau Top Camp, at 2230 meters on north slopes of Mt. Dayman, Maneau Range. Camp in a grassy hollow beside a stream fringed with heavily mossed forest; vegetation of slopes largely fire-induced, frostbitten grassland of alpine type; extensive bodies of forests in valleys and ravines, continuous with forests of lower slopes and extending to near the summits of the peaks (2800-2980 meters) in attenuated gully strips; streams rocky, water temperature at camp 56° F. May 17 to June 19, 1953. (Tate.)

CAMP 5

North slopes of Mt. Dayman at 1550 meters. Camp in tall, fairly heavily mossed oak-*Castanopsis* forest showing transition to rain forest in the ravines and to beech forest on the higher spurs of the mountain; climate wet and misty. June 20 to July 13, 1953. (Tate.)

CAMP 6

North slopes of Mt. Dayman at 700 meters. Camp in oak-rain forest transition zone; climate drier than in camps 4 and 5. July 13-26, 1953. (Tate.)

CAMP 7

Peria Creek, Kwagira River. Camp on bank of creek in tall lowland rain forest at about 50 meters; creek bed about 20 to 30 yards wide, gravelly, containing isolated pools. August 14 to September 6, 1953. (Tate.)

CAMP 8

Bolu Bolu, Goodenough Island, D'Entrecasteaux Group. Camp on a gently grassy slope about one-fourth of a mile from the sea beach and only a few meters above sea level; a dry type of rain forest in nearby gullies; mangrove

swamps and swampy rain forest, with sago palms, at a distance of less than one-half of a mile from camp. September 22 to October 4, 1953 (Brass.)

CAMP 9

East slopes of Goodenough Island at 1600 meters; in heavily mossed montane forest of mixed composition, containing numerous oak and *Castanopsis* trees, an abundance of tree ferns and *Pandanus* and much scrambling bamboo; small rocky streams. October 7-23, 1953. (Brass.)

CAMP 10

East slopes of Goodenough Island at 900 meters; at head of a small, spring-fed stream in tall forest; oak forest-rain forest transition zone. October 24-30, 1953. (Brass.)

DESCRIPTIONS OF NEW SPECIES, WITH NOTES

SUBFAMILY CYLINDROTOMINAE

Stibadocera daymanensis, new species

Figure 1

Size relatively small (wing of male, 8 mm.; antenna, 11 mm.); mesonotal prescutum and scutum polished medium brown, without evident pattern, sternopleurite pale; halteres brown; femora and tibiae light brown; wings uniformly tinged with brownish yellow, veins brown, distinct; R_{2+3} suberect, cell 1st M_2 subrectangular; abdomen dark reddish brown, hypopygium brownish black.

MALE: Length, about 8 mm.; wing, 8 mm.; antenna, about 11 mm.

Rostrum light yellow; palpi dark brown; remainder of mouth parts blackened. Antennae of male long, as shown by the measurements; scape and pedicel light yellow, flagellum slightly darker; flagellar segments elongate-cylindrical, with long outspreading setae that are subequal to or longer than the segments. Front light yellow, posterior part of head somewhat darker.

Pronotum light yellow. Mesonotal prescutum and scutum polished medium brown without evident pattern; posterior sclerites paler brownish yellow. Pleura and pleurotergite chiefly yellow, with a more darkened cloud on the anepisternum, the sternopleurite pale. Halteres brown, base of stem narrowly pale. Legs with the coxae and trochanters pale yellow; femora and tibiae light brown, without white pattern; tarsi broken beyond bases. Wings (fig. 1) uniformly tinged with brownish yellow; veins brown, distinct. Venation: Basal section of R_s unusually short, the second section correspondingly long, nearly twice the straight, suberect R_{2+3} ; cell 1st M_2 subrectangular, basal section of M_3 only a little longer than m ; $m-cu$ beyond midlength of M_{3+4} ,

subequal in length to the distal section of Cu_1 ; cell 2d A relatively narrow.

Abdomen dark reddish brown, hypopygium brownish black.

TYPE: Holotype, male, north slope of Mt. Dayman, Maneau Range, Papua, altitude 1550 meters, June 30 to July 13, 1953 (Tate).

The regional species that is most similar is *Stibadocera papuana* Alexander, which is also from Papua but which can be distinguished by the distinctive pattern of the body and by the coloration and venation of the wings.

SUBFAMILY LIMONIINAE

TRIBE LIMONIINI

Limonia (*Dicranomyia*) *punctulatina*, new species

Figures 2, 7

Belongs to the *punctulata* group; wings restrictedly patterned with darker, including small clouds in the costal cell; male hypopygium with a single rostral spine from a strong basal tubercle; gonapophysis with the mesal-apical lobe blackened, its truncated apex erose.

MALE: Length, about 4 mm.; wing, 4.8–5 mm.

FEMALE: Length, about 4.5 mm.; wing, 4.5 mm.

Rostrum and palpi black. Antennae black; flagellar segments oval, with short verticils. Head dark brownish gray; anterior vertex narrow.

Pronotum grayish brown. Mesonotal prescutum gray, patterned with brown, including a more or less complete central stripe and narrow lateral lines; posterior sclerites of notum gray, the scutal lobes patterned with brown. Pleura brown, vaguely striped with darker brown. Halteres with stem pale, knob darkened. Legs with coxae brown, trochanters yellow; remainder of legs brownish yellow, the outer tarsal segments darker. Wings (fig. 2) faintly tinged with gray, slightly patterned with darker spots, including the origin of R_s , stigma, and as scattered smaller spots at cord, outer end of cell 1st M_2 and less evidently at ends of the outer radial veins; a few small clouds in cell C, others in cell R, together with two larger areas along vein 2d A; veins light brown. Costal fringe relatively short in both sexes. Venation: Sc_1 ending opposite origin of R_s or virtually so; cell 1st M_2 long, subequal to or longer than the distal section of M_{1+2} .

Abdomen of male dark brown, hypopygium brownish yellow; in the female the intermediate tergites more or less brightened. Male hypopygium (fig. 7) with the tergite, t, transverse, relatively large, posterior border shallowly emarginate, the lobes broadly rounded. Basistyle, b, moderately large, its total area about three-fourths of that

of the ventral dististyle; ventromesal lobe stout. Dorsal dististyle a darkened, moderately curved rod, the tip suddenly acute; ventral style, d, with the rostral prolongation stout at base, narrow at tip which bears a single powerful spine from a basal tubercle. Gonapophysis, g, with the mesal-apical lobe blackened, apex truncate, erose, the outer point largest.

TYPES: Holotype, male, Menapi, Cape Vogel Peninsula, Papua, altitude, sea level to 30 meters, March 21 to May 4, 1953 (Tate). Allotopotype, female. Paratopotype, male.

The closest relatives of the present fly include *Limonia* (*Dicranomyia*) *guamicola* Alexander, *L. (D.) poli* Alexander, and *L. (D.) punctulata* (de Meijere), all differing among themselves in the structure of the male hypopygium. The species is entirely different from *L. (D.) sus* Alexander, the only other regional member of the *punctulata* group.

***Limonia* (*Geranomyia*) *conjurata nelites*, new subspecies**

Figures 3, 8

Similar to the typical form (Barrington Tops, New South Wales) in size, coloration of the body, and general structure of the male hypopygium; differing in the details of the last-named and in the pattern and venation of the wings. In the present fly Sc_2 is strongly retained.

MALE: Length, excluding rostrum, about 10 mm.; wing, 9 mm.; rostrum, about 1.2 mm.

Rostrum light brown, very short, especially the labial palpi which are only about one-third as long as the base, appearing as short rods with a small apical lobule or cap; maxillary palpi dark brown. Antennae with scape and pedicel dark brown; flagellum broken. Head brownish gray; anterior vertex narrow, less than the diameter of the scape; posterior vertex with scattered black punctures.

Cervical region and pronotum pale brown. Mesonotal prescutum buffy brown, with a broad, central, medium brown stripe and narrower darker lateral areas; a small circular spot in the humeral region; a further conspicuous blackened pattern on the prescutum and adjoining sclerites, including two linear dashes on the prescutum, one sublateral, the other marginal, with further similar lines on the dorsopleural region and extreme dorsal propleura; posterior sclerites of notum light brown, the scutal lobes extensively darker; scutellum brown, paler at base; mediotergite faintly pruinose. Pleura yellowish brown, without evident pattern. Halteres infuscated, base of stem

yellowed. Legs with coxae yellowish brown; trochanters obscure yellow; remainder of legs broken. Wings (fig. 3) tinged with brown, with two faintly darker clouds in costal field, one at the supernumerary cross vein in cell Sc, the second at end of vein Sc and origin of Rs; stigma not differentiated; veins brown. Costal fringe short. Venation: Sc short, Sc₁ ending about opposite one-fourth of the length of Rs, Sc₂ close to origin of the latter; supernumerary cross vein in cell Sc distinct; free tip of Sc₂ opposite the fork of Rs, the vein R₁ beyond it very long; branches of Rs virtually parallel to one another, the cell slightly narrowed outwardly; cell 1st M₂ subequal in length to distal section of M₃; m-cu at fork of M; distal section of Cu₁ unusually short, about two-thirds of m-cu.

Abdominal tergites brown, subterminal segments darker, posterior borders of the basal segments narrowly paler; basal sternites testaceous yellow, outer segments darker. Male hypopygium (fig. 8) with the posterior border of the tergite, t, produced into two slender blades or rods, separated by a deep, U-shaped notch. Basistyle, b, with the ventromesal lobe large, the apical setae very long. Dorsal dististyle nearly straight; ventral style, d, in total area less than that of the basistyle, the main body conspicuously bilobed; rostral prolongation with a single long slender spine that is about two-thirds as long as the dorsal style. Gonapophysis, g, with mesal-apical lobe slender, nearly straight.

TYPE: Holotype, male, Menapi, Cape Vogel Peninsula, Papua, altitude, sea level to 30 meters, March 21 to May 4, 1953 (Tate).

***Limonia (Geranomyia) procax*, new species**

Figures 4, 9

General coloration brownish black to black, more or less pruinose, especially the posterior sclerites of the notum and the pleura; rostrum elongate, approximately one-half of the wing; knobs of halteres obscure yellow; legs brown; wings nearly hyaline, unpatterned except for the more or less darkened stigma; cell 1st M₂ elongate, exceeding any of the veins beyond it.

MALE: Length, excluding rostrum, about 6–7 mm.; wing, 6.5–8 mm.; rostrum, about 3–3.5 mm.

FEMALE: Length, excluding rostrum, about 7–7.5 mm.; wing, 7.2–7.5 mm.; rostrum, about 3.5–4 mm.

Rostrum black throughout, elongate, as shown by the measurements; outer lobes of labial palpi filiform. Antennae black throughout; flagellar segments subcylindrical, verticils short. Head gray, the

anterior vertex silvery white; anterior vertex narrow to very narrow, less than the width of two rows of ommatidia, usually narrower, in cases the eyes appearing to be virtually contiguous.

Pronotum black, pruinose. Mesonotum brownish black, pruinose, the sides of the prescutum and the posterior sclerites more heavily so. Pleura heavily pruinose, dorsopleural membrane darkened. Halteres with stem pale brown, knob ranging from pale brown to obscure yellow. Legs with the fore coxae blackened, remaining coxae and trochanters obscure yellow; remainder of legs brown, the outer tarsal segments darker. Wings (fig. 4) nearly hyaline, the costal border light yellow; stigma pale brown, oval, in cases very reduced; veins brown, those in the costal field more brownish yellow. Venation: Sc relatively long, Sc₁ ending opposite to some distance beyond the fork of Rs (the latter condition in the type); Rs straight, subequal to the more arcuated basal section of R₄₊₅; cell 1st M₂ elongate, exceeding any of the veins beyond it; m short, transverse, basal section of M₃ much longer, strongly arcuated to angulated before midlength; m-cu close to midlength of M₃₊₄.

Abdomen brown. Male hypopygium (fig. 9) with the tergite transverse, posterior border very weakly emarginate. Basistyle, b, small, scarcely one-sixth of the size of the unusually large ventral dististyle, the ventromesal lobe large. Dorsal dististyle a strongly curved, pale sickle, the tip slightly upcurved and narrowed into a spine; ventral style, d, exceedingly large in proportion to the size of its rostral prolongation; spines of the latter small, straight, a little shorter than the length of the prolongation beyond their base. Gonapophysis, g, with the mesal-apical lobe a pale flattened blade. Apical lobes of aedeagus of moderate size.

Types: Holotype, male, east slope of Goodenough Island, Papua, altitude 900 meters, October 24–30, 1953 (Brass). Allotopotype, female. Paratopotype, male; paratypes, one male, one female, Mt. Dayman, Maneau Range, Papua, north slope at 2230 meters, May 17 to June 19, 1953 (Brass); one female, Mt. Dayman, altitude 700 meters, July 13–20, 1953 (Brass); one male, Denglagu to Numbu, northeast New Guinea, July 5, 1955 (J. Linsley Gressitt), in the Bernice P. Bishop Museum, Honolulu.

Limonia (Geranomyia) procax is readily distinguishable from all other regional members of the subgenus that have cell 1st M₂ of the wings elongate, as described, by the coloration of the body and the unpatterned wings.

***Helius* (*Rhampholimnobia*) *guttulinus*, new species**

FEMALE: Length, including rostrum, about 6.5–7 mm.; wing, 5.2–5.4 mm.; rostrum, about 0.7–0.8 mm.

Characters generally as in *Helius* (*Rhampholimnobia*) *fenestratus* Alexander, differing as follows: Mesonotal prescutum with the narrow central brown stripe subtended on each side by a silvery line that ends at near two-thirds of the length of the sclerite; anterior end of central stripe suffused with silvery, at posterior end concentrated into a narrow line. Knobs of halteres brownish black. Legs with femora yellow, at outer end with three subequal rings, the innermost brown, followed by white, the tip yellowed; remainder of legs light yellow. Wings with the ground whitened, heavily patterned with dark brown, the latter only a little less extensive than the pale areas; pre-arcular field and cells C and Sc yellow; the major darkened areas include broad bands at cord and before origin of Rs, the latter area beginning at R, crossing the wing, interrupted in cell Cu; cell R_3 with two major areas, their centers adjoining vein R_{4+5} vaguely paler; pale interspaces more extensive than in *fenestratus*, each with a very faint, dusky, central cloud so that a narrow ring of the whitened ground surrounds this central darkening; in *fenestratus* the pale areas are uniformly clear. Abdominal tergites ringed caudally with silvery; sternites with paired silvery spots.

Types: Holotype, female, north slope of Mt. Dayman, Maneau Range, Papua, altitude 700 meters, July 13–20, 1953 (Tate). Paratopotype, a broken female with the type; paratype, female, east slope of Goodenough Island, Papua, altitude 900 meters, October 24–30, 1953 (Brass).

***Helius* (*Rhampholimnobia*) *spinteris*, new species**

Figure 5

Belongs to the *papuanus* group; size large (wing of male, 6.5 mm.); general coloration of prescutum cinnamon brown, on each side of anterior half with a silvery gray area; pleura dark brown, with two narrow, longitudinal, silvery stripes; halteres yellow; legs yellow, femora with a single, narrow, brown, subterminal ring; wings pale yellow, with a delicate reticulated brown pattern, including Y-shaped marks in cells R and R_3 ; a concentration of dark areas in the region of the arculus.

FEMALE: Length, including rostrum, about 7 mm.; wing, 6.5 mm.; rostrum, about 1.2 mm.

Rostrum relatively long, black; palpi with first and last segments darkened, the intermediate pair yellow. Antennae with scape black, pruinose, pedicel more intensely blackened, flagellum brown, the unmodified basal segment vaguely brightened. Head dark gray, the anterior vertex and a broad central stripe on posterior vertex blackened, the latter not reaching the posterior border.

Cervical sclerites black. Pronotum light brown, sparsely pruinose. Mesonotal prescutum cinnamon brown, including a complete central stripe, the sublateral parts of the anterior half silvery gray; posterior sclerites of notum dark brown. Pleura dark brown, with two narrow longitudinal silvery stripes, the more ventral one extending from the ventral sternopleurite to beneath the halteres, the dorsal stripe shorter. Halteres entirely pale yellow. Legs with the coxae infuscated; trochanters yellow; femora yellow, with a narrow to very narrow brown subterminal ring that is only about one-third to one-half as wide as the yellow tip; remainder of legs yellow, the outer two tarsal segments infuscated; mid-femora at base with a linear row of about 10 erect bristles. Wings (fig. 5) pale yellow, the pre-arcular and costal fields more saturated yellow; a conspicuous brown reticulated pattern, the markings very narrow and delicate, much narrower than the pale interspaces; no dark area in cell R_1 ; cell R_3 with a Y-shaped mark near the base and a solidly darkened area before the outer end; three dark areas in cell R, the outer two convergent behind, united in cell M to form a larger marking; a concentration of dark areas at and beyond the arculus, involving also h; veins brown, darker in the clouded parts, yellow in the costal interspaces. Anterior branch of Rs glabrous or with only one or two trichia; remaining veins beyond cord with abundant trichia. Venation: Outer section of Rs varying from about one-half of to nearly equal to r-m; inner end of cell 1st M_2 transverse, not pointed; m-cu about one-third to two-thirds of its length before the fork of M.

Abdomen brown, the segments ringed with silvery about as in other species of the subgenus.

TYPES: Holotype, female, north slope of Mt. Dayman, Maneau Range, Papua, altitude 700 meters, at light, July 13-20, 1953 (Tate). Paratopotype, female.

Helius (Rhampholimnobia) spinteris is readily distinguishable from all other regional members of the *papuanus* group by the pattern of the legs and wings. The nature of the wing pattern is superficially more as in *H. (R.) subreticularatus* Alexander, a member of the *reticulatus* group of the subgenus.

TRIBE HEXATOMINI

***Epiphragma* (*Epiphragma*) *chionopeza*, new species**

Figures 6, 10

Size medium (wing of male, 8.5 mm.); mesonotal prescutum brown, almost covered by four obscure yellow stripes, pleura brownish black; antennae short, basal flagellar segment yellow, the remainder black, with very long verticils; femora brownish yellow, the tips broadly and vaguely darker, outer tarsal segments snowy white; wings infuscated, the costal border extensively patterned with yellow; a series of seven darker brown costal areas alternating with the yellow interspaces; m-cu at near midlength of M_{3+4} ; male hypopygium with the outer dististyle decurved at tip into a strong spine; interbase bent laterad at apex into two unequal spines.

MALE: Length, about 10 mm.; wing, 8.5 mm.; antenna, about 1.5 mm.

Rostrum buffy; palpi black. Antennae of male short; scape brown, pedicel slightly paler; first segment of flagellum clear light yellow, the remaining segments black; first segment beyond the fusion short, the succeeding ones longer, becoming long-cylindrical, with very long verticils, the longest about four times the segment. Head brown, sparsely pruinose, the anterior vertex cinnamon brown, about three times as wide as the diameter of the scope.

Pronotum orange, more yellowed posteriorly, infuscated on sides. Mesonotal prescutum with the very restricted ground brown, with four obscure yellow stripes, the intermediate pair separated by a vague broken capillary line of the ground; a linear brown sublateral line; interspaces with conspicuous black setae; posterior sclerites of notum, including the scutal lobes, more infuscated, the postnotum brightened along the suture. Pleura almost uniformly brownish black, the dorso-pleural region a little paler. Halteres with stem obscure yellow, knob infuscated. Legs with the coxae brownish black, the tips whitened, least so on the fore pair, extensively on the others; trochanters whitened; femora brownish yellow, the tips broadly but vaguely darker, involving nearly the outer fourth or fifth, preceded by a narrow clearer yellow ring; tibiae and basitarsi light brown, of the posterior legs more yellowed; base of second tarsal segment narrowly darkened, remainder of tarsi snowy white. Wings (fig. 6) with the ground strongly infuscated, on cephalic third along the costal border variegated by yellow; seven brown costal areas placed at arculus, origin of R_s , over the supernumerary cross vein in cell C, fork of Sc , R_{1+2} , and tips of veins R_3 and R_4 ; interspaces broadly yellow but their centers weakly

clouded, further restricting the amount of clear yellow color; very small yellow subterminal spots in outer ends of cells R_4 to M_3 , inclusive; a small yellow spot at arculus; veins dark brown, yellow in the interspaces. Costal fringe short. Venation: R_s square and spurred at origin; m-cu at near midlength of M_{3+4} ; cell M_1 nearly three times its petiole.

Abdominal tergites brown, the posterior borders of the segments narrowly more yellowed, outer segments more uniformly darkened; basal sternites dark brown laterally, leaving a continuous central yellow line. Male hypopygium (fig. 10) with the basistyle, b, long and slender, more than twice as long as the dististyles. Outer dististyle, d, relatively slender, narrowed outwardly, its apex a curved hook; basal two-thirds of style with abundant microscopic setulae and a few strong setae on outer margin; inner style a little longer, its tip obtuse. Interbase, i, a gently curved rod, at tip with two strong lateral spines, the outer one smaller and more strongly curved. Aedeagus short.

TYPE: Holotype, male, east slope of Goodenough Island, Papua, altitude 1600 meters, October 7–23, 1953 (Brass).

Epiphragma (*Epiphragma*) *chionopeza* is readily distinguishable from all other previously described members of the genus by the snowy white tarsi.

Gynoplistia (*Gynoplistia*) brassi, new species

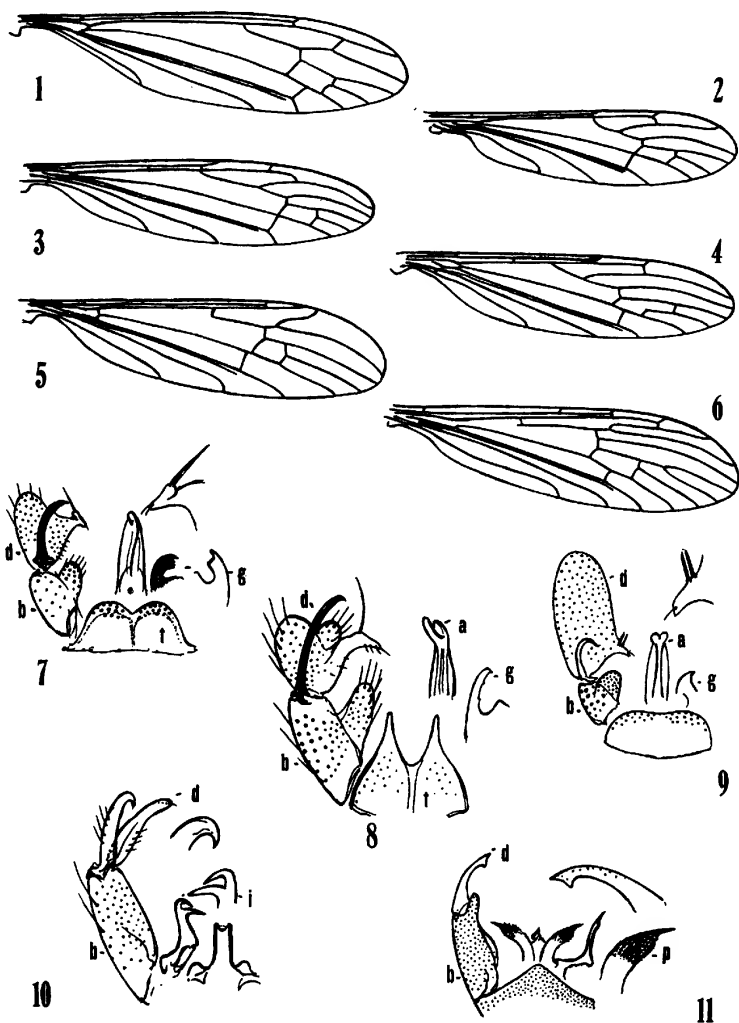
Figures 11, 12

Head and thorax fulvous yellow; antennae 16-segmented, with 11 branched segments; legs black, femoral bases yellow; wings light yellow, very heavily cross-banded with brown, cells C and Sc uniformly darkened; cell M_1 present; abdomen black; male hypopygium with the dististyle slightly dilated at apex; gonapophyses appearing as divergent horns, terminating in blackened spines, outer ends with abundant, appressed, scale-like points.

MALE: Length, about 7 mm.; wing, 8.5 mm.

Rostrum brown; basal segments of palpi brownish yellow, outer two black. Antennae 16-segmented; formula $2 + 2 + 9 + 3$; basal segments yellow, remainder black excepting the ends of the proximal two flagellar segments; longest branch about two-fifths of the length of the flagellum; terminal branch subequal to the segment; terminal segment shorter than the antepenultimate. Head brownish yellow.

Thorax uniformly fulvous yellow, the surface shiny. Halteres black, base of stem narrowly reddened. Legs with coxae fulvous yellow; trochanters yellow; femora yellow basally, with about the outer



FIGS. 1-6. Venation. 1. *Stibadocera daymanensis*, new species. 2. *Limonia* (*Dicranomyia*) *punctulatina*, new species. 3. *Limonia* (*Geranomyia*) *conjurata nelites*, new subspecies. 4. *Limonia* (*Geranomyia*) *procax*, new species. 5. *Helius* (*Rhampholimnobia*) *spinteris*, new species. 6. *Epiphragma* (*Epiphragma*) *chionopeza*, new species.

FIGS. 7-11. Male hypopygium. 7. *Limonia* (*Dicranomyia*) *punctulatina*, new species. 8. *Limonia* (*Geranomyia*) *conjurata nelites*, new subspecies. 9. *Limonia* (*Geranomyia*) *procax*, new species. 10. *Epiphragma* (*Epiphragma*) *chionopeza*, new species. 11. *Gynoplistia* (*Gynoplistia*) *brassi*, new species.

Symbols: a, aedeagus; b, basistyle; d, dististyle; g, gonapophysis; i, interbase; t, tergite.

third brownish black; remainder of legs black. Wings (fig. 12) with the restricted ground light yellow, very extensively patterned with brown, the dark color exceeding the ground; cells C and Sc uniformly darkened; the remaining dark pattern includes four bands, the basal one at and beyond arculus, narrowed along vein Cu, expanded over vein 2d A; second band at origin of Rs, complete and nearly parallel-sided, more or less constricted at Cu; third band very extensive on anterior half, including the outer end of Rs and the stigmal region, narrowed behind, reaching the generally darkened posterior border beyond m-cu; wing tip most extensively darkened, the ground area between it and the third band restricted to a large spot beyond cell 1st M_2 in cells R_4 to M_3 , with smaller areas in cell 1st M_2 and base of cell M_4 ; the marginal darkening includes the posterior border as far back as the axillary part of cell 2d A; veins light brown, a trifle paler in the ground. Macrotrichia on veins beyond cord, including Rs, R_{2+3+4} , all but the bases of R_{2+3} , R_3 , and R_4 , outer two-thirds of R_5 and outer ends of M_1 and M_2 , lacking on the other medial veins. Venation: Rs long; cell M_1 shorter than its petiole; m-cu at near one-third of M_{3+4} .

Abdomen black. Male hypopygium (fig. 11) with the posterior border of tergite strongly produced medially. Basistyle, b, slender, both the dorsal and ventral apical lobes moderately developed, provided with long setae. Dististyle, d, single, blackened, gradually narrowed outwardly, at apex dilated, the outer apical point more acute. Phallosome, p, with the gonapophyses distinctive, appearing as divergent horns, the tip of each produced into a black spine, the surface of outer half with abundant, appressed, scale-like points; aedeagus very reduced; lateral arms of phallosome slender, angularly bent before midlength, tip acute.

TYPE: Holotype, male, east slope of Goodenough Island, Papua, altitude 1600 meters, October 7-23, 1953 (Brass).

I take great pleasure in naming this very distinct fly for the distinguished botanist, Mr. L. J. Brass, who collected many desirable Tipulidae while on Goodenough Island. In the striking cross-banded wing pattern, the fly is most like the otherwise very different *Gynoplistia* (*Gynoplistia*) *peramoena* Alexander.

TRIBE ERIOPTERINI

Trentepohlia (*Paramongoma*) *tatei*, new species

Figure 13

Size medium (wing of male, 6 mm.); mesonotal prescutum with the disk virtually covered by three diffuse dark brown stripes, pleura

light brown; legs dark brown; wings tinged with brown, costal and outer radial fields darker; veins Cu_1 and 1st A widely separated at margin, cell Cu being subequal in marginal extent to cell 2d M_2 .

MALE: Length, about 5.2 mm.; wing, 6 mm.

Rostrum dark brown; palpi black. Antennae black, relatively short; flagellar segments suboval, verticils relatively short. Head dark brownish gray; anterior vertex reduced to a narrow line.

Cervical region dark brown; pronotum light buffy. Mesonotal prescutum with three diffuse to virtually confluent dark brown stripes, the humeral and lateral margins broadly buffy yellow; posterior sclerites of notum darker brown; pleurotergite paler, especially on dorsal part. Pleura light brown, the dorsopleural membrane darker. Halteres with stem brownish yellow, knob dark brown. Legs with coxae brownish yellow; trochanters yellow; remainder of legs dark brown, the tarsi paling to lighter brown. Wings (fig. 13) tinged with brown, cells C and Sc, with the outer radial field, darker; stigma still darker brown, small, short-oval; veins brown. Venation: Rs long, about twice R_{2+3+4} , the latter and R_{3+4} subequal; veins R_3 and R_4 strongly divergent, cell R_3 at margin about one-half more extensive than cell R_2 ; cell 1st M_2 approximately as long as the distal section of vein $R_5 + M_{1+2}$; m-cu near fork of M; veins Cu_1 and 1st A widely separated, cell Cu at margin subequal in extent to cell 2d M_2 .

Abdominal tergites dark brown; sternites yellow; subterminal segments uniformly darkened; hypopygium chestnut brown.

TYPE: Holotype, male, north slope of Mt. Dayman, Maneau Range, Papua, altitude 2230 meters, May 17 to June 19, 1953 (Tate).

This distinct species of the subgenus is named for the collector, Mr. Geoffrey M. Tate, mammalogist of the Fourth Archbold Expedition. The only other regional member so far described is *Trentepohlia* (*Paramongoma*) *lucrifera* Alexander, a small, pale-winged fly that differs in all details of coloration.

***Trentepohlia* (*Mongoma*) *brassi*, new species**

Figure 14

Size very large (wing about 12 mm.); general coloration dark brown, prescutum in cases with four obscure orange-yellow stripes that virtually cover the disk; legs medium brown, tarsi slightly paler; wings weakly suffused with brown; Rs shorter than R_{2+3+4} , R_2 and R_{3+4} subequal; cell 1st M_2 unusually small, short-rectangular; apical fusion of veins Cu_1 and 1st A short.

MALE: Length, about 11–12 mm.; wing, 11–13 mm.

FEMALE: Length, about 14–15 mm.; wing, 13–14 mm.

Rostrum brown. Antennae with scape and pedicel brown, flagellum black; flagellar segments subcylindrical; verticils short and inconspicuous. Head dark brown; anterior vertex reduced to a very narrow carinate strip.

Cervical region brown, pronotum more chestnut brown. Mesonotal prescutum with the restricted ground brown, usually virtually covered by four obscure orange-yellow stripes, the intermediate pair separated by a capillary ground line, in cases the prescutum more uniformly dark brown; scutum with the midregion testaceous, lobes obscure yellow, each with an oval orange area that is encircled by brown; scutellum and postnotum orange-yellow. Pleura yellowish brown, darker above, especially on the dorsopleural membrane. Halteres infuscated, base of stem restrictedly yellow. Legs with coxae brownish yellow, trochanters clearer yellow; remainder of legs medium brown, the tarsal segments slightly paler. Wings (fig. 14) weakly tinged with brown; stigma represented only by a linear darkening in cell Sc above R_2 ; veins brown. Venation: Rs shorter than R_{2+3+4} ; R_2 and R_{3+4} subequal; cell R_2 at margin slightly more extensive than cell R_3 ; cell 1st M_2 unusually small, short-rectangular to nearly quadrate, the veins beyond it correspondingly long; m-cu at near midlength of M_{3+4} ; apical fusion of Cu_1 and 1st A short.

Abdominal tergites brown, the basal ones paler, hypopygium chestnut brown; sternites obscure yellow, the sides vaguely more darkened. Ovipositor with the cerci unusually long and slender, gently upcurved.

Types: Holotype, male, east slope of Goodenough Island, Papua, altitude 1600 meters, October 7–23, 1953 (Brass). Allotopotype, female. Paratopotypes, several of both sexes.

This large and conspicuous member of the genus is dedicated to the collector, Mr. L. J. Brass. It is quite distinct from the other regional members of the subgenus, being more like *Trentepohlia* (*Mongoma*) *brunnea* Edwards and some others, differing from all of these superficially similar forms in the venation, especially of the radial and medial fields.

Gonomyia (Lipophleps) bilobata, new species

Figure 18

Mesonotum light brown, the scutellum behind broadly obscure yellow; rostrum yellow; antennae and legs black; wings with Sc short; male hypopygium with a single deeply forked dististyle placed at base of the elongate outer lobe of the basistyle; phallosome entirely pale,

the central organ deeply bilobed at tip.

MALE: Length, about 3 mm.; wing, 3.8 mm.

Rostrum light yellow; palpi brownish black. Antennae black; flagellar segments long, with dense, erect, long, pale setae. Head dark gray.

Pronotum and pretergites pale yellow. Mesonotal prescutum and the scutal lobes light brown, median region of scutum obscure yellow; posterior callosities of scutal lobes and the scutellum pale yellow, the latter with a darkened spot at base; mediotergite light brown, the anterolateral part yellow, pleurotergite yellow. Pleura testaceous yellow. Halteres dark brown, stem pale at base. Legs with coxae and trochanters pale yellow; remainder of legs brownish black. Wings tinged with brown, stigma barely indicated; veins brown. Venation: Sc short, Sc₁ ending a distance before origin of Rs that exceeds one-half of the length of the latter, Sc₂ far from tip of Sc₁; branches of Rs divergent, the anterior one straight; basal section of R₅ very reduced to punctiform; cell 1st M₂ relatively small, strongly narrowed at base, the second section of M₁₊₂ less than one-half of the distal section; m-cu just before the fork of M.

Abdomen dark brown. Male hypopygium (fig. 18) with the outer lobe of basistyle, b, elongate, stout, projecting beyond the level of the dististyle, the setae at the slightly enlarged apex elongate. Dististyle, d, single, expanded shortly beyond the narrow base, the dilated part with several setae; at apex the style divides into two long branches that are subequal in length to the base, one branch a blackened spine, the other nearly as long, pale, with a single fasciculate seta at its tip. Phallosome, p, entirely pale, appearing as an elongate central organ that is deeply divided at apex into two obtuse lobes; central structure subtended basally by two pale lobes that are tipped with a few microscopic setulae.

TYPE: Holotype, male, Biniguni, Gwariu River, Papua, altitude 150 meters, July 27 to August 14, 1953 (Tate).

Gonomyia (*Lipophleps*) *bilobata* is quite distinct from all other regional members of the subgenus in the structure of the male hypopygium, in conjunction with the short Sc of the wings.

***Gonomyia* (*Lipophleps*) *pararamifera*, new species**

Figure 19

Allied to *ramifera*; general coloration of thorax, including the scutellum, brown to black, pleura with a whitened longitudinal stripe; male hypopygium with the outer dististyle relatively short and stout, nearly parallel-sided, apex shallowly emarginate; inner style with the

apex dilated, basal style broad, its outer third narrowed into a spine; phallosome without blackened spinous points.

MALE: Length, about 3 mm.; wing, 3.8 mm.

FEMALE: Length, about 3.3 mm.; wing, 3.8 mm.

Head of the type lost. Pronotum above and the pretergites whitened. Mesonotal prescutum and scutum dark brown, pseudosutural foveae black; scutellum and postnotum black, heavily gray pruinose. Pleura black, sparsely pruinose to appear plumbeous, with a narrow grayish white longitudinal stripe from and including the fore coxae, extended backward to the base of abdomen, passing beneath the root of the halteres. Halteres with stem brownish black, knobs broken. Legs with coxae other than the fore pair darkened; trochanters obscure yellow; remainder of legs broken. Wings subhyaline, stigma not or scarcely indicated; veins brown, those comprising the cord darker. Venation: Sc_1 ending opposite origin of R_s ; basal section of R_5 relatively long, about one-third of the arcuated r-m; cell 1st M_2 widened outwardly, about as long as the distal section of vein M_3 ; m-cu shortly before fork of M .

Abdomen black. Male hypopygium (fig. 19) of the general type of *ramifera*, differing in the structure of the dististyles and phallosome. Outer dististyle, d, relatively short and only slightly arcuated, not markedly narrowed outwardly, the tip microscopically bidentate; inner style with a long, slender, lateral branch, as in *ramifera*, the apex beyond the branch very broad, densely setiferous; basal style broad on proximal two-thirds, the outer end narrowed into a long black spine; a few setae on outer half, including two of unusual length, these evidently representing the usual fasciculate setae in the subgenus. Phallosome, p, without blackened spinous points but of entirely different form from that of *subramifera*, the various parts as shown, the most conspicuous being the apparent aedeagus which bears an oval pendent lobe on the lower or cephalic edge.

Types: Holotype, male, Peria Creek, Kwagira River, Papua, altitude 50 meters, August 14 to September 6, 1953 (Tate). Allotopotype, female.

Gonomyia (Lipophleps) pararamifera is allied to *G. (L.) ramifera* Alexander and *G. (L.) subramifera*, new species, all being best distinguished by the structure of the male hypopygium. In the discussion of the male hypopygium in this group and a few other species in the Australasian fauna, the strict homologies of the part discussed as being a basal style remain in question. It lies far basad on the inner face of the basistyle in the position usually occupied by the interbase but

seems unquestionably to be a dististyle that has migrated cephalad to this position.

***Gonomyia (Lipophleps) scythra*, new species**

Figure 17

Size small (wing of male, 3.5 mm.); mesonotum light brown, the lateral prescutal borders whitened, scutellum pale yellow; pleura light brown above, with a conspicuous white longitudinal stripe; male hypopygium with two terminal dististyles, the outer a long, sickle-shaped blade with two blackened spines; phallosome complex, including paired bilobed gonapophyses.

MALE: Length, about 3.5 mm.

Rostrum and palpi brownish black. Antennae with scape darkened, pedicel enlarged and slightly paler, flagellum dark brown; flagellar segments elongate, with very long verticils. Head discolored.

Mesonotum light brown, the pretergites and narrow borders of the pretergites white; scutellum behind broadly pale yellow. Pleura light brown dorsally, with a conspicuous, white, longitudinal stripe that includes the fore coxae, passing beneath the halteres to the base of the abdomen, narrowly bordered by darker brown. Halteres with stem yellow, knob infuscated, the apex narrowly lined with yellow. Legs with the fore coxae whitened, as described, remaining coxae and all trochanters obscure yellow; remainder of legs brown, the outer tarsal segments scarcely darker; terminal segment shorter than the penultimate but stouter. Wings of the unique type missing.

Abdomen brown. Male hypopygium (fig. 17) distinctive. Dististyles, d, two, terminal in position, the outer a long blackened sickle, the basal half stouter, at point of narrowing produced into two unequal stout black spines, the outer margin of the longer one with microscopic serrulations, outer half of style very gradually narrowed into a long acute point; inner style suboval, stout, the narrowed apex terminating in two long fasciculate setae that are only a little shorter than the style. Phallosome, p, complex, including a pair of gonapophyses, each bifid, one arm a strong black spine, the other a longer, flattened, yellow blade that narrows to a point, the outer margin with pale membrane; the unpaired elements of the phallosome include a powerful curved blackened hook, its long apical point bent at a right angle; aedeagus relatively short, yellow, the apex more dilated, obliquely truncate.

TYPE: Holotype, male, Baiawa, Moi Biri Bay, Papua, altitude, sea level to 30 meters, May 6-10, 1953 (Tate).

Gonomyia (Lipophleps) scythra is entirely distinct from all other

regional members of the subgenus in the structure of the male hypopygium.

***Gonomyia (Lipophleps) subramifera*, new species**

Figure 21

Allied to *ramifera*; rostrum and antennae black; pleural pale stripe narrow but conspicuous; male hypopygium with the basal dististyle a broad sinuous blade, its tip a slender black spine; all elements of phallosome pale, the elongate gonapophyses with decurved tips.

MALE: Length, about 4.5 mm.; wing, 3.8–3.9 mm.

FEMALE: Length, about 5 mm.; wing, 4.5 mm.

Rostrum and palpi black. Antennae with basal segments blackened, flagellum black; flagellar segments in male with very long verticils. Head above chiefly darkened.

Pronotum yellow above, darkened on sides; pretergites pale yellow, more obscured posteriorly. Mesonotum dark brown, central area of scutum, posterior borders of scutal lobes, and the broad margin of scutellum yellow. Pleura and pleurotergite brownish black, sparsely pruinose, with a relatively narrow but conspicuous whitened ventral stripe. Halteres with stem brownish yellow, knob dark brown. Legs with coxae brownish black, fore pair obscure yellow; trochanters brownish yellow; femora obscure yellow to brownish yellow, with a narrow dark brown subterminal ring, preceded by a narrower clear yellow annulus, the tip less evidently brightened; tibiae yellow, tip narrowly black; tarsi brownish yellow, outer segments broken. Wings weakly tinged with brown, pre-arcular and costal fields pale yellow; stigma barely indicated; veins pale brown, the cord more darkened. Venation: Sc_1 ending opposite origin of R_s , Sc_2 faint, slightly removed from tip; R_s strongly arcuated, its branches divergent, R_5 ending at wing tip, its basal section conspicuous; m-cu some distance before the fork of M.

Abdomen brownish black. Male hypopygium (fig. 21) generally as in *ramifera*, differing in all details but especially in the basal dististyle and phallosome. Inner dististyle, d, with the erect basal lobe elongate; basal style much broader than in *ramifera*, narrowed at base, sinuous, the tip an acute black spine. Phallosome, p, entirely pale, consisting of a depressed-flattened central plate, the outermost blades with microscopic setulae; a pair of elongate apophyses, their tips decurved, in shape slightly suggestive of the beak of a flamingo.

TYPE: Holotype, male, Biniguni, Gwariu River, Papua, altitude 150 meters, July 27 to August 14, 1953 (Tate).

The most similar species include *Gonomyia* (*Lipophleps*) *ramifera* Alexander and *G. (L.) pararamifera*, new species, all differing among themselves in the structure of the male hypopygium.

***Gonomyia* (*Lipophleps*) *tatei*, new species**

Figure 20

Size medium (wing of male, over 4.5 mm.); rostrum black; general coloration of mesonotum dark brown, scutellum broadly yellow posteriorly; pleura brownish black, with a very conspicuous light yellow longitudinal stripe; halteres light yellow; legs dark brown; wings tinged with brown, Sc_1 ending about opposite origin of R_s , basal section of R_5 long; male hypopygium with each outer lateral angle of the tergite produced into a powerful black spine; three terminal dististyles, the outer dilated on basal third; inner style strongly bent, terminating in a blackened spine; phallosome including three separate elements, a depressed-flattened structure that bears a pair of small black spines beyond midlength, a second structure terminating in a strong black spine, the third element being the aedeagus which terminates in a curved hook.

MALE: Length, about 4 mm.; wing, 4.7 mm.

FEMALE: Length, about 4.2 mm.; wing, 5 mm.

Rostrum and palpi black. Antennae with scape brownish black, the enlarged pedicel dark brown, broadly yellow at apex; flagellum black, the segments elongate, with the usual very long verticils of the male sex. Head orange-yellow, the center of the vertex darkened.

Pronotum and pretergites light yellow, the latter continued backward to the wing root. Mesonotal prescutum and scutum dark brown; pseudosutural foveae blackened, midregion of scutum pruinose; scutellum broadly yellow, infuscated medially at base; mediotergite pruinose on anterior half, the posterior part darker; pleurotergite and anterolateral area of mediotergite reddish yellow, the former darker ventrally. Pleura brownish black, with a very conspicuous light yellow longitudinal stripe, extending from and including the fore coxae, passing beneath the halteres to the base of abdomen. Halteres uniformly clear light yellow. Legs with the fore coxae yellow, as described, the remaining coxae brown; trochanters light brown; remainder of legs dark brown. Wings tinged with brown, the pre-arcular field and costal region light yellow; stigma very pale brown, inconspicuous; veins very light brown. Venation: Sc_1 ending opposite the origin of R_s or virtually so, Sc_2 at its tip; basal section of R_5 long, transverse, exceeding one-half of the length of the gently arcuated r-m; cell 1st M_2 sub-

equal in length to the outer section of vein M_3 ; m-cu at fork of M.

Abdomen dark brown, the posterior borders of the segments vaguely pale. Male hypopygium (fig. 20) with the tergite, t, large, each outer lateral angle produced into a powerful black spine, the intervening margin gently concave, pale and membranous; a group of setae on inner margin of each spine. Basistyle relatively stout. Dististyles, d, three, terminal; outer style largest, dilated at base, the outer two-thirds slender, very gently curved, outer part of the dilated base with microscopic points that terminate in a slender seta; outer edge of the extended distal part of style with scattered microscopic denticles; intermediate style smallest, appearing as a pale, gently curved cushion, densely provided with soft setae; inner style placed close to the others, a long slender rod that is strongly recurved beyond midlength, terminating in a powerful black spine, surface of style with a few scattered small setae and an outer pair of elongate bristles that evidently represent the usual fasciculate setae of this subgenus. Phallosome, p, complex, including some blackened points, with three separate elements that are shown in the figure, a broad central disk that terminates in a depressed-flattened pale blade, at the base of which, on each side, is a strong incurved black spine; longest blackened element a strong curved spine; third element evidently representing the aedeagus, a narrow structure that is suddenly constricted at apex, terminating in a strongly recurved hook.

Types: Holotype, male, north slope of Mt. Dayman, Maneau Range, Papua, altitude 2230 meters, May 17 to June 19, 1953 (Tate). Allotopotype, female.

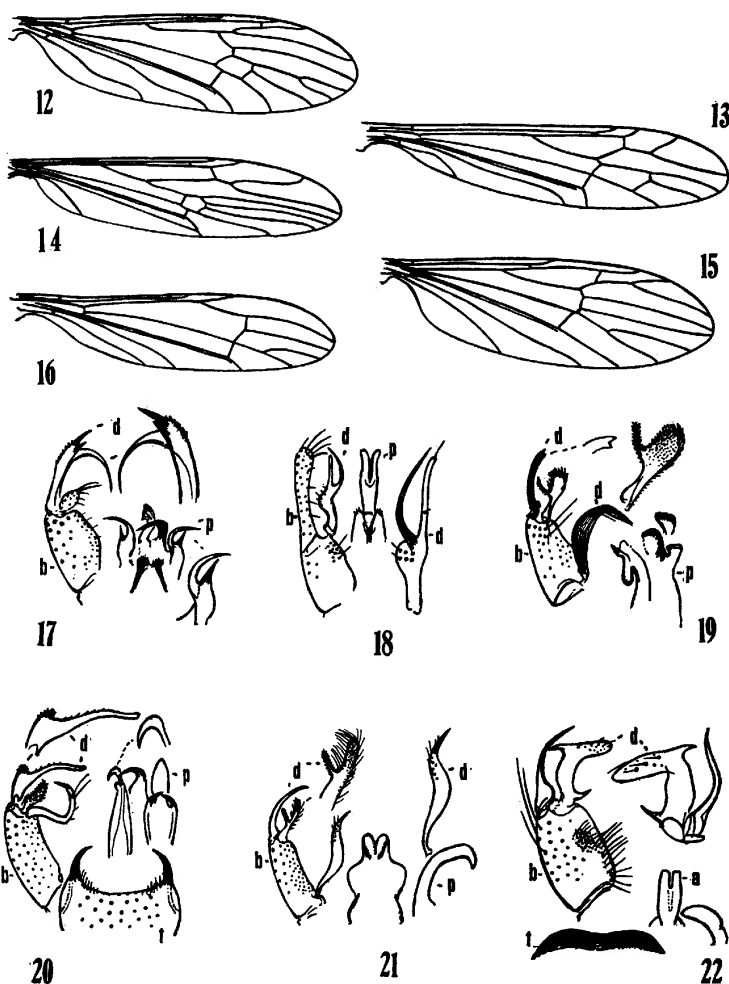
I name this very distinct species for the collector of this interesting series of crane flies from the Maneau Range, Mr. Geoffrey M. Tate. It is quite distinct from all other New Guinea members of *Lipophleps* in the structure of the male hypopygium, including all parts but especially the tergite, dististyles, and phallosome.

***Cheilotrichia (Empeda) maneauensis*, new species**

Figure 15

Size large (wing of female, 5.5 mm.); general coloration of mesonotal prescutum and scutum brownish gray, scutellum light yellow; rostrum brownish black, head above light gray; halteres clear pale yellow; legs brownish yellow, without scales; wings pale yellow; veins yellow, the arculus and cord infuscated; Sc_1 long, Sc_1 ending just beyond midlength of Rs ; m-cu just before the fork of M.

FEMALE: Length, about 5 mm.; wing, 5.5 mm.



FIGS. 12-16. Venation. 12. *Gynoplistia* (*Gynoplistia*) *brassi*, new species. 13. *Trentepohlia* (*Paramongoma*) *tatei*, new species. 14. *Trentepohlia* (*Monogoma*) *brassi*, new species. 15. *Cheilotrichia* (*Empeda*) *maneuensis*, new species. 16. *Toxorhina* (*Toxorhina*) *acanthobasis*, new species.

FIGS. 17-22. Male hypopygium. 17. *Gonomyia* (*Lipophleps*) *scythra*, new species. 18. *Gonomyia* (*Lipophleps*) *bilobata*, new species. 19. *Gonomyia* (*Lipophleps*) *paramifera*, new species. 20. *Gonomyia* (*Lipophleps*) *tatei*, new species. 21. *Gonomyia* (*Lipophleps*) *subramifera*, new species. 22. *Toxorhina* (*Toxorhina*) *acanthobasis*, new species.

Symbols: a, aedeagus; b, basistyle; d, dististyle; p, phallosome; t, tergite.

Rostrum and palpi brownish black. Antennae brownish black; flagellar segments oval, a little shorter than the verticils, terminal segment small. Head light gray; anterior vertex broad, more than twice the diameter of the scape.

Pronotum very pale yellow, with a large dorsal gray area; sides of scutellum and propleura infuscated, pruinose; pretergites and dorsopleural region pale yellow. Mesonotal prescutum and scutum brownish gray, humeral region vaguely more reddened; scutellum light yellow, the disk at base slightly pruinose, parascutella brownish yellow; postnotum brown, vaguely patterned with obscure yellow. Pleura and pleurotergite dark brown, sparsely pruinose. Halteres clear pale yellow. Legs with fore coxae brownish black, remaining coxae and all trochanters obscure yellow; remainder of legs brownish yellow, outer tarsal segments infuscated; segments without scales. Wings (fig. 15) pale yellow, the pre-arcular and costal fields somewhat clearer yellow; veins yellow, infuscated at arculus and cord. All veins excepting those at and near arculus with macrotrichia. Venation: Sc long, Sc₁ ending just beyond midlength of Rs; R₂ and R₂₊₃₊₄ subequal; vein R₃ oblique, cell R₃ at margin slightly less than three times as extensive as cell R₂; cell M₂ open by the atrophy of m; m-cu just before the fork of M.

Abdominal tergites reddish brown, dark brown laterally; sternites chiefly light yellow. Ovipositor with cerci horn yellow, slightly darker at bases.

TYPE: Holotype, female, north slope of Mt. Dayman, Maneau Range, Papua, altitude 2230 meters, May 17 to June 19, 1953 (Tate).

The only other species of the subgenus so far described from New Guinea is the smaller *Cheilotrichia* (*Empeda*) *albidibasis* (Alexander), readily distinguishable by the short subcosta of the wings.

Toxorhina (**Toxorhina**) **acanthobasis**, new species

Figures 16, 22

Size medium (wing, about 5 mm.); mesonotum gray, the prescutum with three virtually confluent brown stripes; legs light brown; wings subhyaline, Sc₁ ending opposite or just before the origin of Rs, m-cu at or close to the fork of M; male hypopygium with an acute spine on mesal edge of inner dististyle near base; arms of aedeagus short and stout, lying parallel to one another, separated by a short linear notch.

MALE: Length, excluding rostrum, about 5–5.5 mm.; wing, 4.5–5 mm.; rostrum, about 5.5–6 mm.

FEMALE: Length, excluding rostrum, about 6 mm.; wing, 5.5 mm.

Rostrum brownish black, in male elongate, subequal to remainder

of body. Antennae with scape and pedicel ranging from yellow to brown, flagellum black. Head light gray; anterior vertex moderately broad, subequal to the diameter of the scape.

Cervical region and pronotum light brown. Mesonotal prescutum gray laterally, the disk with three virtually confluent brown stripes; posterior sclerites of notum gray, the centers of the scutal lobes extensively brown. Pleura gray above, patterned with brown on the anepisternum; ventral sternopleurite usually paler, more reddened. Halteres with stem obscure yellow, knob infuscated. Legs with coxae brownish yellow; trochanters obscure yellow; remainder of legs light brown. Wings (fig. 16) subhyaline, the extreme base yellowed; veins brown. Strong macrotrichia on Rs, R₅, M₁₊₂, and most of M₃. Venation: Sc₁ ending opposite (in type) or before origin of Rs, Sc₂ far retracted, Sc₁ alone about one-third of RS; cell M₃ variable in size, from subequal in length to its petiole to about one-half of this length; m-cu at or just beyond the fork of M.

Abdominal tergites dark brown, basal sternites a little paler; hypopygium fulvous. Male hypopygium (fig. 22) with the tergite, t, a narrow, smooth, darkened, transverse band, its posterior border very gently emarginate, the lobes very low. Mesal face of basistyle, b, with a compact group of small setae at near midlength, with a more extensive aggregation of strong setae more basal in position, the outer bristles very microscopically roughened, the more basal ones long but smooth. Outer dististyle, d, a long, slender, curved spine; inner style large, the spine-like lobe on outer margin acute at tip; on mesal edge at base with an acute pale spine. Aedeagus, a, with the arms short and stout, lying parallel to one another, separated by a short linear notch.

Types: Holotype, male, Korip, northeast New Guinea, July 12, 1955 (Gressitt); in Bernice P. Bishop Museum, Honolulu. Allotopotype, female, pinned with type. Paratopotypes, males and females, one female pinned with type; paratypes, two males, east slope of Goodenough Island, Papua, altitude 900 meters, October 24–30, 1955 (Brass).

The most similar regional species is *Toxorhina* (*Toxorhina*) *pulvinaria* Alexander, most readily distinguished by the structure of the male hypopygium, particular the basistyle and inner dististyle.